Metal Detector DIY Kit

1. Introduction

Metal Detector is a high performance metal detector designed for security.

2.Parameter

NO.	Parameter	Value
1	Name	Metal Detector
2	Operating Voltage	DC 3-5V
3	Operating Current	40mA
4	Standby Current	5mA
5	Detection Distance	60mm
6	Alarm mode	Sound/Light
7	Difficulty	Easy
8	PCB Size	86*61mm

3.Application

1>. Game entertainment

2>. Security check

3>. Search for metal products

5>. Car detection

5>. Traffic Statistics

6>. Elevator floor control

7>. Production equipment position detection

8>. Production equipment development and design

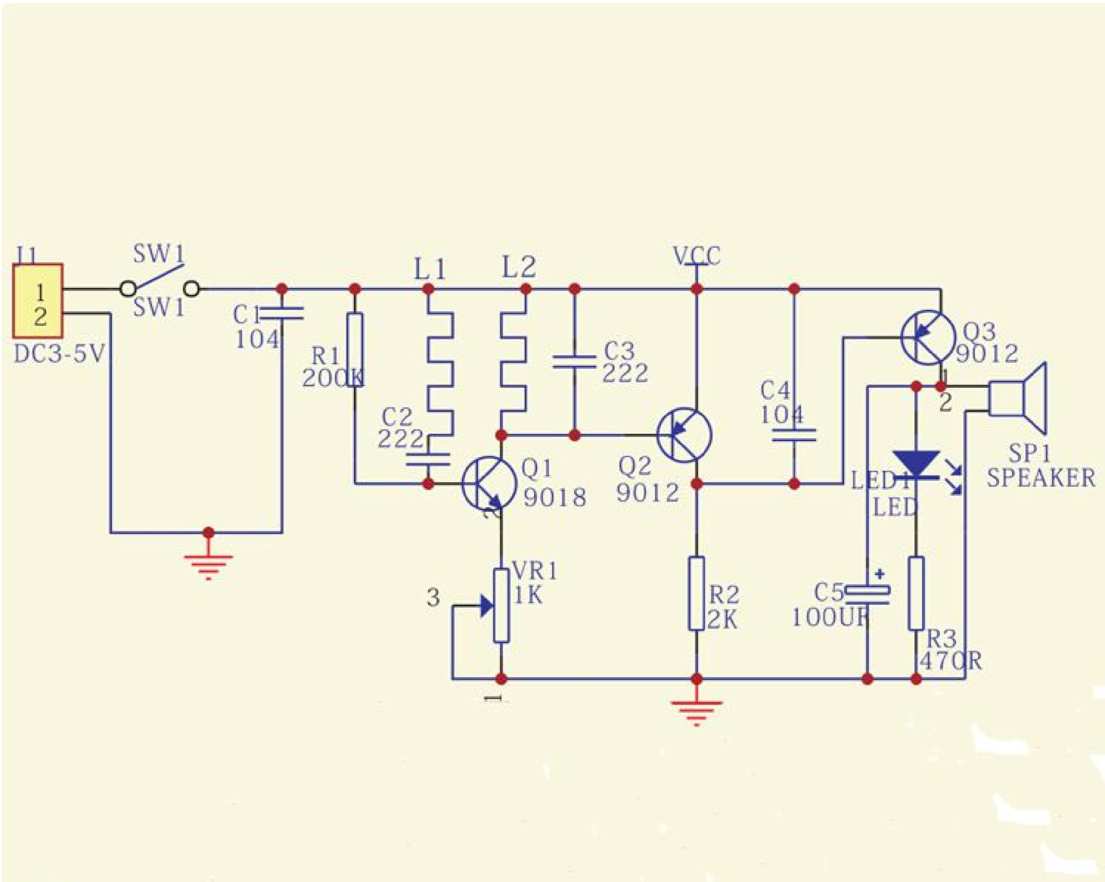
9>. Electronic Product Design

10>. Play equipment development

11>. Metal proximity switch

12>. Metal detection in human body

4.Schematic



5.Component listing

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R3	470ohm	1
2	Metal Film Resistor	R2	2K	1
3	Metal Film Resistor	R1	200K	1
4	Potentiometer	VR1	100R	1

5	Ceramic Capacitor	C2,C3	0.022uf	2
6	Ceramic Capacitor	C1,C4	0.1uf	2
7	Electrolytic Capacitor	C5	100uf	1
8	Red LED	LED1	5mm	1
9	S9012	Q2.Q3	TO-92	2
10	S9018	Q1	TO-92	1
11	Power Switch	SW1	6*5mm	1
12	Buzzer	SP1	9*12mm	1
13	Power Socket	J1	KF301-2P	1
14	PCB		MDS-60	1

NOTE:Users can complete the installation by PCB silk screen and component listing

6.Installation Steps

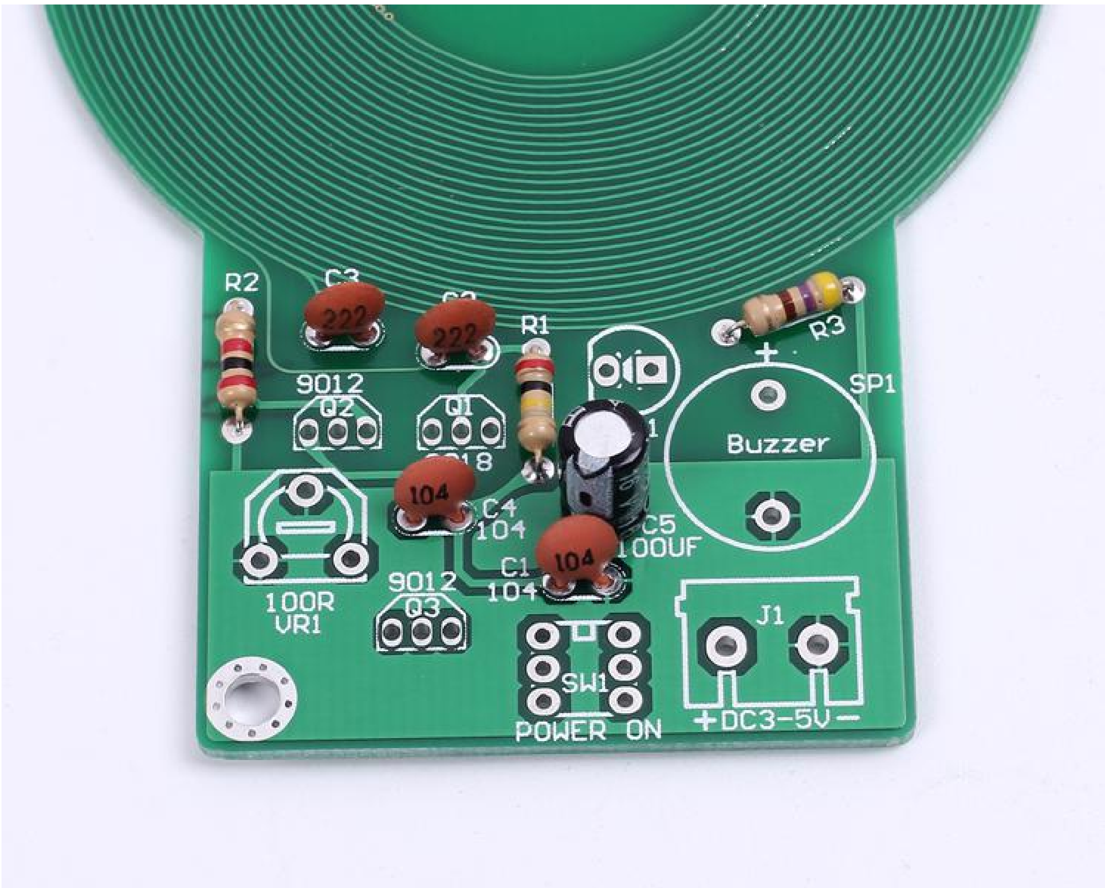




Step 1:Install Metal Film Resistor R1=200K;R2=2K;R3=470ohm.



Step 2: Install Capacitor:C1,C4=104pF;C2,C3=222pF;C5=100uF



Step 3:Install 2pcs S9012 on Q2,Q3;1pcs S9018 on Q1;1pcs potentiometer on VR1.



Step 4:Install power self-locking switch.Pay attention to the installation direction!!





Step 5:Install Buzzer and Power socket.

